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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,987	05/15/2001	Robert Bischoff	1623	3581

7590

07/31/2002

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EXAMINER

HAMDAN, WASSEEM H

ART UNIT

PAPER NUMBER

2858

6

DATE MAILED: 07/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/831,987

Applicant(s)

BISCHOFF, ROBERT

Examiner

Wasseem H Hamdan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> . | 6) <input type="checkbox"/> Other: |

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Part III - DETAILED ACTION

Specification

1. The specification is objected to, because:
 - a. On page 1, lines 20/21, where it is stated “ examples according to IPC H01C 17/242”, it is required to explain what is meant by “ examples according to IPC H01C 17/242”.
 - b. on page 4, line 32, the specification refers to claims and subclaims. The specification should explain the invention without referring to the claim for the details.
 - c. on page 5, line 18, where it is stated “islands and around these” is not clear what the applicant means.
2. The specification is objected to, because it is all one section, and it does not follow the format according to the MPEP. Please see below the “content of the specification” format:

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification. It should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

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- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- © Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Reference to a "Microfiche Appendix": See 37CFR 1.96© and MPEP § 608.05, if the application was filed before March 1, 2001. The total number of microfiche and the total number of frames should be specified. Reference to a "Sequence Listing," a table, or a computer program listing appendix submitted on compact disc and an incorporation by reference of the material on the compact disc.
- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art: A description of the related art known to the applicant and including, if applicable, references to specific related art and

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problems involved in the prior art which are solved by the applicant's invention.

This item may also be titled "Background Art."

- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are

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conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

- (I) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet (37 CFR 1.52(b)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(I)-(p).
- (j) Abstract of the Disclosure: A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims.
- (k) Drawings: See 37 CFR 1.81, 1.83-1.85, and MPEP § 608.02.
- (l) Sequence Listing, if on paper: See 37 CFR 1.821-1.825.

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3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: There is no support in the specification for “the sensor with a sufficiently thin substrate has a sensor-active layer on all sides”, which they are claimed in claim 6.

Abstract

4. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Claim Objections

5. Claims 4 and 7 are objected to because of the following informalities:

a. Regarding claim 4, lines 11-12 where it stated “... within special geometric figures” it is vague and unclear what are the claim limitation.

b. Regarding claim 7, line 12, where it is stated “hyperstructures with anisometries” it is vague and unclear what are the claim limitation.

Appropriate correction is required.

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Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-8, are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan (US Patent 4,358,951) in view of Peter (US Patent 6,145,964).

Regarding claim 1, Chang disclose an electrode arrangement [Fig. 1 (18)] for an electrical component and carrier for sensors [Fig. 1 (10); column 2, line 41-42], which arrangement is applied on a substrate [Fig. 1 (14); column 3, lines 16-17], this arrangement consisting of two electrically conductive electrodes [Fig. 1 (18)], which are not electrically connected with one another [Fig. 1 (18); column 2, lines 52-63], and a surface structure [Fig. 1 (16)] with suitable dimensions for the representation of the conductivities of the electrode [Fig. 1; column 41-51] arrangement and/or of the substance of a sensor-active layer by the conductance of a measuring probe or of a function element [column 2, lines 37-51], so characterized that on a substrate between two electrodes a number of conductive islands [Fig. 2 (26, 28)], which are not or are not essentially connected with one another [Fig. 2 (26, 28)], are applied as a two-dimensional area arrangement [Fig. 2 (26, 28)].

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Regarding claim 1, Chang discloses the essential elements of the claimed invention. Chang do not explicitly disclose dielectric substrate between two electrodes. Chang discloses substrate between two electrodes [Fig. 1 (14); column 3, lines 16-17] but did not mentioned if it is dielectric substrate or not. Using dielectric substrate between two electrodes in sensor's technology is common and expected in order to sense any parameter's variations or some applications it is used as a protective film from mechanical damage. Peter discloses dielectric substrate between two electrodes [Fig. 2 (1, 2, 3, 4)]. It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to modify the teachings of Chang by including dielectric substrate between two electrodes. The skilled artisan would have been motivated to modify Chang as above for the purpose of sensing parameter's variations or protective film from mechanical damage [Peter: column 2, lines 63-64]. In re Keller, 208 USPQ 871 (CCPA 1981).

Regarding claims 2-8, the limitations in lines 1-9 are exactly the same and identical to the limitations in lines 1-9 of claims 1 (the same structural elements), which already are discussed above. Therefore claims 2-8; lines 1-9 are rejected under the same rational.

Regarding claim 2, Chang discloses that the structure of the conductive islands consists of a fine distribution of conductive substances on any insulating substrate [Fig. 1 (14); column 2, lines 54-55; Fig. 2 (12) column 3, line 6].

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Regarding claim 3, Chang discloses, that the substance of the conductive islands is firmly set on the substrate and in particular it is sputtered on, steamed on, squirted on, dabbed on, imprinted or sprayed on [Fig. 2 (12); column 3, line 10].

Regarding claim 4, Chang discloses that the conductive islands are arranged within special geometric figures [Fig. 2 (28)].

Regarding claim 5, Chang discloses that the surface of the carrier for a sensor is coated with a material-selective substance [column 3, lines 6-12; lines 43-48].

Regarding claim 6, Chang discloses that a carrier for the sensor with a sufficiently thin substrate has a sensor-active layer on all sides [column 3, lines 6-11] .

Regarding claim 7, Chang discloses that the conductive islands in their short-range order show hyperstructures with anisometries of the substances with respect to the substrate [Fig. 2)26, 28)].

Regarding claim 8, Chang discloses that isotropic structures of conductive islands with ring-shaped electrodes are arranged on the substrate [Fig. 2 (28)].

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8. Claim 8, is rejected under 35 U.S.C. 103(a) as being unpatentable over Chan (US Patent 4,358,951) in view of Peter (US Patent 6,145,964) as applied to claim 1 above, and further in view of Blechinger et al. (US Patent 5,205,170).

Regarding claim 9, Chang and Peter disclose the essential elements of the claimed invention. However, Chang and Peter do not explicitly disclose that the electrode arrangement is designed as a large area as a function element in particular as panel heating elements. Blechinger et al. discloses that the electrode arrangement is designed as a large area as a function element in particular as panel heating elements [FIG. 1 (20); column 4, lines 59-60]. It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to modify the teachings of Chang and Peter by including that the electrode arrangement is designed as a large area as a function element in particular as panel heating elements. The skilled artisan would have been motivated to modify Chang and Peter as above for the purpose of producing heat or energy [Blechinger et al. 57-61]. In re Keller, 208 USPQ 871 (CCPA 1981).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wasseem Hamdan whose telephone number is (703) 305-3968. The examiner can normally be reached Monday-Thursday from 700AM-400PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (703) 308-0750.

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The fax phone number for this Art Unit is (703)308-7722 or (703)308-7724.

Any inquiry of a general nature or relating to the status of this application should be directed to the Receptionist at (703) 305-3800.

10. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:


(703) 308-7722 or (703) 308-7724, or (703) 305-3431, or (703) 305-3432 (for formal communications intended for entry, please label "FORMAL" and sign as attorney of record)

Or:

(703) 305-9724 (for informal or draft communications, please label "PROPOSED" or "DRAFT" and prominently label PLEASE DELIVER DIRECTLY TO EXAMINER)

Hand-delivered responses should be brought to Crystal Plaza 4 [fourth Floor (Receptionist)], 2201 South Clark Place, Arlington, VA. 22202.

Wasseem H. Hamdan



July 29, 2002